

As a Registered Professional Electrical Engineer in the State of North Carolina (#6251) having many years of Electric Power Utility (Duke Energy) and other communications (1st Class / General Radiotelephone with Shipboard Radar Endorsement / Extra Class Ham KZ4B) and heavy industrial electronics experience --I claim to speak with some authority on the Subject matter. You should already be well advised of the following:

- 1) Existing electric utility power transmission lines do NOT in any way even begin to meet the electrical criteria for proper non-radiating radio frequency signal transmission lines. This is due to the fact that there are (and can not be in relatively high voltage power distribution service) no closely-spaced (within inches or less-not feet) parallel open-wire transmission lines with opposing radio frequency currents able to magnetically cancel one-another out so as to preclude radiated interference. You can NOT use existing power transmission line infrastructure for digital communications at useful baud rates without harmful radiation in the radio frequency spectrum currently used for wireless communications.
- 2) The only way to provide a data transmission service on utility power transmission line support structures would be to utilize some form of shielded / co-axial cable or closely-spaced (and preferably twisted) paired conductor scheme that would functionally duplicate the Cable TV Industry. Why duplicate an existing service with something similar?
- 3) Don't be fooled by the argument that the electric utilities have successfully used "high line carrier current systems" for most of this century with no interference problems. This argument is equating apples to oranges--as the baud rate (for simple on / off protective relay trip status signals, Etc.) is super-low--allowing operation to be maintained well below 200 kHz at the highest frequency. The necessarily radiated interference is in a virtually unused portion of the radio frequency spectrum where there is no-one to hear and therefore complain. You've no doubt heard the old riddle--"if there is a noise in the forrest and no-one is there to hear it--is there REALLY any noise"
4. Ask the technical talent in the cable, land-line telephone, relay satellite and any other potentially competing service(s) if they think it is possible to transmit signals in the 200kHz to 30 MHz range and up over existing electric utility transmission lines. Above all--make sure the electric utilities are required to meet even lower radiation leakage limits than the cable industry due to the unusually long range radiation / interference zone particular to the high frequency / short wave portion of the radio spectrum.
- 5) If the FCC is simply honest is protecting the various wireless communications services --especially those occupying the so called short-wave spectrum--then the whole issue will most likely "go away" because of a lack of technical feasibility with regard to the use of existing electric power transmission infrastructure. Also--don't let the power industry compete directly with cable via the "back door" unless it can be found to be in the public's best interest. Even one ENRON is too many!

Thanks for your interest in my input!